

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3087	heat near2 radiat\$ near2 plate	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:15
L2	1839	heat near radiat\$ near plate	US-PGPUB; USPAT	ADJ	ON	2007/07/14 09:04
L3	5	2 same reactor	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:16
L4	58	2 same (low or lowered or lowering) near2 temperature	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:30
L5	1	2 same (decreased or decreasing) near2 temperature	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:28
L6	39	2 same (temperature near2 difference)	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:36
L7	11	2 same (temperature near2 reduce)	US-PGPUB; USPAT	ADJ	ON	2007/07/14 08:41
L8	18	1 and "422".clas.	US-PGPUB; USPAT	ADJ	ON	2007/07/14 09:04
L9	0	2 with transferring near2 heat	US-PGPUB; USPAT	ADJ	ON	2007/07/14 09:05
L10	19	2 with transferring near2 heat	US-PGPUB; USPAT	ADJ	ON	2007/07/14 09:05
S1	3	((("5658538") or ("3212862") or ("3424553")).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/13 08:39
S2	4976	422/198,199,200,201,202,203,204,205,206,207,207,208.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/07/13 08:40
S3	89	S2 and double near (piping or tube or tubing or pipe)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 10:44
S4	11	("2042922"   "2345423"   "3212862"   "4714592"   "4952375"   "5084247"   "5110564"   "5523061").PN. OR ("5658538").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 08:59
S5	1057	heat near exchange near2 effluent	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 09:00
S6	109	S5 and shell near2 tube	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 09:00
S7	6	("4372920"   "4637918"   "4769220").PN. OR ("4942022").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 09:23

## EAST Search History

S8	34	("20020146359"   "20050129593"   "2612350"   "2672849"   "3467504"   "3909299"   "4049048"   "4113441"   "4249596"   "4434846"   "4904455"   "4942022"   "5048596"   "5248566"   "5382271"   "5434846"   "5484577"   "5518705"   "5762658"   "5772707"   "5888355"   "5915472"   "5938800"   "5989503"   "6033793"   "6077620"   "6123913"   "6126908"   "6179048"   "6232005"   "6444179").PN. OR ("7220392").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 09:25
S9	69	("1692476"   "1742888"   "2123799"   "2809922"   "3278452"   "3367882"   "3661767"   "3705009"   "3787188"   "4127389"   "4162290"   "4256783"   "4321130"   "4352341"   "4471821"   "4702891").PN. OR ("4904455").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 09:31
S10	35	("20040123523"   "20050129593"   "2612350"   "2672849"   "3467504"   "3909299"   "4049048"   "4113441"   "4249596"   "4434846"   "4904455"   "4942022"   "5048596"   "5248566"   "5382271"   "5434846"   "5484577"   "5518705"   "5762658"   "5772707"   "5888355"   "5915472"   "5938800"   "5989503"   "6033793"   "6077620"   "6123913"   "6126908"   "6179048"   "6232005"   "6444179"   "6623719").PN. OR ("7172737").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 10:02
S11	15	"3212862"	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 10:02
S12	0	"3212862"".pn"	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 10:02
S13	2	"3212862".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 10:09
S14	1	"6146606".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 10:09
S15	2	((("6221117") or ("6146606")).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/13 10:09

## EAST Search History

S16	6465	double near (piping or tube or tubing or pipe)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 10:45
S17	1734	S16 and heat (exchange or exchanger)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 10:46
S18	2294	S16 and (reactor or reaction)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 10:45
S19	918	S17 and (reactor or reaction)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 11:36
S20	16428	double near (piping or tube or tubing or pipe)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 10:46
S21	2931	S20 and heat (exchange or exchanger)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 10:54
S22	1030	S21 and (reactor or reaction)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 10:54
S23	112	S21 and (reactor or reaction)	EPO; JPO; DERWENT	ADJ	ON	2007/07/13 10:55
S24	54	reactor near6 (exchange or exchanger) near6 module	US-PGPUB; USPAT	ADJ	ON	2007/07/13 11:45
S25	463	422/201.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/07/13 11:45
S26	53371	inner near (tube or pipe)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 11:45
S27	38	S25 and S26	US-PGPUB; USPAT	ADJ	ON	2007/07/13 11:45
S28	23	("2029604"   "3334971"   "3501516"   "3607125"   "3962300"   "3993457"   "4013454"   "4048250"   "4122110"   "4348487"   "4559207"   "4714593").PN. OR ("5266281").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 13:15
S29	13	422/201.ccls. and 422/198.ccls. and 422/205.ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 13:23
S30	3	"6698509"	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 13:23
S31	3	((("6698509") or ("6796374") or ("7172737"))).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/13 13:24

## EAST Search History

S32	35	("20040123523"   "20050129593"   "2612350"   "2672849"   "3467504"   "3909299"   "4049048"   "4113441"   "4249596"   "4434846"   "4904455"   "4942022"   "5048596"   "5248566"   "5382271"   "5434846"   "5484577"   "5518705"   "5762658"   "5772707"   "5888355"   "5915472"   "5938800"   "5989503"   "6033793"   "6077620"   "6123913"   "6126908"   "6179048"   "6232005"   "6444179"   "6623719").PN. OR ("7172737").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 13:31
S33	3787639	integrated or consolidate or consolidated or integrate or integration or combine or combined	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:34
S34	2822591	reactor or reaction or bed	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:35
S35	1193400	exchange or exchanger	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:35
S36	829	S33 same S34 same S35	EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:36
S37	396	S33 with S34 with S35	EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:36
S38	69	S37 and (module or unit)	EPO; JPO; DERWENT	ADJ	ON	2007/07/13 13:37
S39	51	("3472631"   "3506408"   "3556738"   "3807963"   "3909299"   "4337224"   "4666680"   "4714592"   "4865624"   "4904455"   "4932981"   "5232682").PN. OR ("5382271").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:26
S40	13	("0389900"   "2066198"   "3672847"   "4083695"   "4692306"   "4810472"   "4935037"   "5382271").PN. OR ("6423279").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:34
S41	5	("20020064487"   "4849187"   "5711661"   "6423279"   "6468480").PN. OR ("7214251").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:37

## EAST Search History

S42	21	("3541729"   "3909299"   "4504447"   "4692306"   "4767791"   "4849187").PN. OR ("4935037").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:38
S43	11	("0688020"   "1812341"   "1826548"   "1900715"   "4430304").PN. OR ("4767791").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:41
S44	7	("1869973"   "3731733"   "3958630"   "4147209"   "4904455"   "5382271").PN. OR ("6039113").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/13 14:43
S45	3	("3472631").URPN.	USPAT	ADJ	ON	2007/07/13 15:25
S46	14532	catalyst bed	USPAT	ADJ	ON	2007/07/13 15:25
S47	18168	catalyst bed	US-PGPUB; USPAT	ADJ	ON	2007/07/13 15:25
S48	144	S47 same (exchange tube or exchanger tubes)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 16:23
S49	2267	422/198.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/07/13 16:24
S50	965	S49 and (tube or pipe)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 16:28
S51	266	S49 and catalyst bed	US-PGPUB; USPAT	ADJ	ON	2007/07/13 16:33
S52	24	((("2,612,350") or ("2,672,849") or ("3,467,504") or ("3,909,299") or ("4,049,048") or ("4,113,441") or ("4,249,596") or ("4,434,846") or ("5,048,596") or ("5,248,566") or ("5,382,271") or ("5,434,846") or ("5,484,577") or ("5,762,658") or ("5,772,707") or ("5,888,355") or ("5,915,472") or ("5,938,800") or ("5,989,503") or ("6,033,793") or ("6,077,620") or ("6,123,913") or ("6,126,908") or ("6,179,048") or ("6,232,005"))).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/13 16:47
S53	2267	422/198.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/07/13 16:47
S54	266	S53 and catalyst bed	US-PGPUB; USPAT	ADJ	ON	2007/07/13 17:02
S55	5	((("6190623") or ("5858314") or ("6066307") or ("5458857") or ("6059995"))).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/13 17:29
S56	4730	double (tube or pipe or tubing or piping)	US-PGPUB; USPAT	ADJ	ON	2007/07/13 17:30

## EAST Search History

S57	40	S56 and S53	US-PGPUB; USPAT	ADJ	ON	2007/07/13 17:30
S58	0	detachable near2 casing with reactor	US-PGPUB; USPAT	ADJ	ON	2007/07/14 06:28
S59	10	detachable near2 cover with reactor	US-PGPUB; USPAT	ADJ	ON	2007/07/14 06:31
S60	4	detachable near2 housing with reactor	US-PGPUB; USPAT	ADJ	ON	2007/07/14 06:28
S61	104	(removable or detachable or remove or detach) near2 (cover or casing or housing or shell) near6 reactor	US-PGPUB; USPAT	ADJ	ON	2007/07/14 06:32
S62	93	S61 not S60 not S59	US-PGPUB; USPAT	ADJ	ON	2007/07/14 07:02
S63	362	double near4 (pipe or piping or tube or tubing) near4 concentric\$	US-PGPUB; USPAT	ADJ	ON	2007/07/14 07:02
S64	14	S63 with exchange	US-PGPUB; USPAT	ADJ	ON	2007/07/14 07:12
S65	11333	outlet near3 (annular or annulus)	US-PGPUB; USPAT	ADJ	ON	2007/07/14 07:12
S66	29	S65 and 422/198.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/07/14 07:16
S67	3	((("1707417") or ("2853371") or ("3041151")).PN.	US-PGPUB; USPAT	OR	OFF	2007/07/14 07:17
S68	0	("1707417").URPN.	USPAT	ADJ	ON	2007/07/14 07:24
S69	1	("2853371").URPN.	USPAT	ADJ	ON	2007/07/14 07:25
S70	2	("3041151").URPN.	USPAT	ADJ	ON	2007/07/14 07:25
S71	19	("1932247"   "2740803"   "3041151"   "3197288"   "3212862"   "3488161").PN. OR ("3932139").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:46
S72	1	eyebolt with reactor with casing	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:46
S73	5444	eyebolt	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:46
S74	91	S73 with casing	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:47
S75	1	S74 with removable	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:47

## EAST Search History

S76	1	S74 same reactor	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:59
S77	7047	fins with heat exchange	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 07:59
S78	164	S77 same reactor	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 08:00
S79	1452	S77 with (improve or improved or better or increase or increased)	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 08:00
S80	21	S79 same reactor	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/07/14 08:13